



mm PT9150

Description

- Linear Position to 1700 inches (4300 cm)
- Stroke Range Options: 0-600 to 0-1700 inches
- VLS Option To Prevent Free-Release Damage
- IP67 · NEMA 6 Protection
- Extended range



With its incremental optical encoder and industrial design this rugged transducer provides the highest accuracy and longest life of any measurement device of its kind. This model is available in a wide variety of resolutions and output stages to fit virtually any requirement.

It can measure up to 1700", yet when its cable is retracted it is only 6" long. Its small size and low-cost-to-measurement ratio offers remarkable flexibility and value.

GENERAL

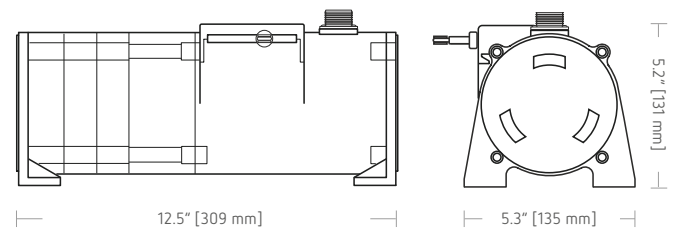
Full Stroke Range Options (on this datasheet)	0-600 to 0-1700 inches
Output Signal	incremental encoder (quadrature)
Output Driver Options	TTL/CMOS, open collector or line driver
Accuracy	0.04% full stroke
Repeatability	± 0.02% full stroke
Resolution Options	10 to 250 pulses per inch
Measuring Cable	nylon-coated stainless steel
Enclosure Material	powder-painted aluminum or stainless steel
Sensor	optical incremental encoder
Maximum Retraction Acceleration	see ordering information
Maximum Velocity	see ordering information
Weight, Aluminum (Stainless Steel) Enclosure	14 lbs. (28 lbs.) max.

ELECTRICAL

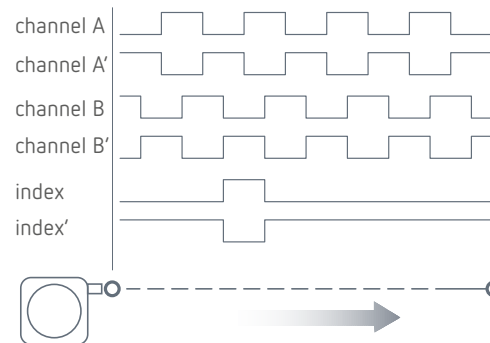
Input Voltage	see ordering information
Input Current	see ordering information

ENVIRONMENTAL

Enclosure	NEMA 4/4X/6, IP 67
Operating Temperature	0° to 160°F (-17° to 71°C)
Vibration	up to 10 g to 2000 Hz maximum

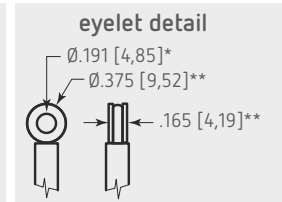
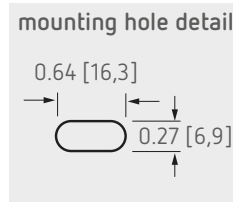
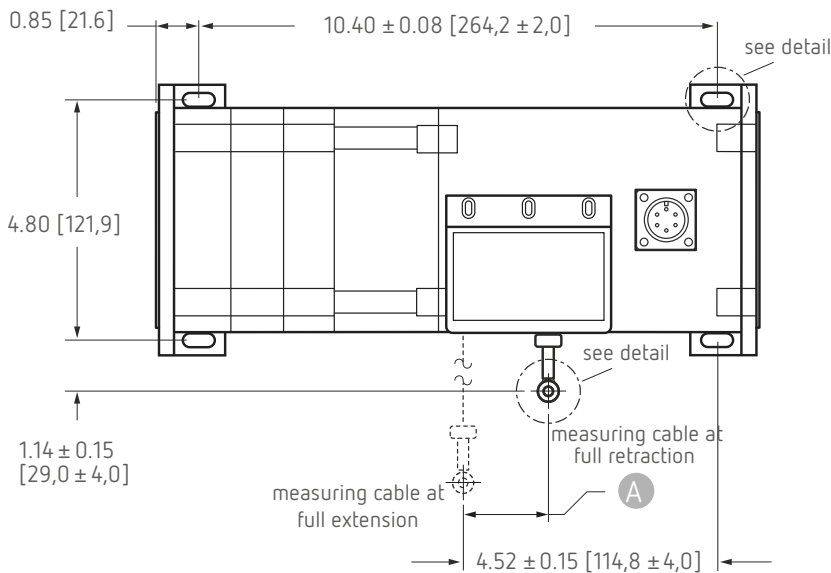


Output signal options

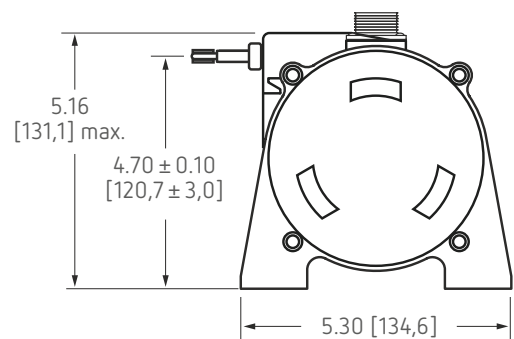
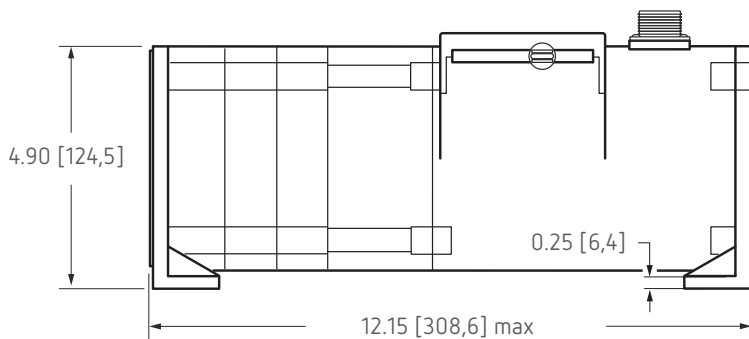


-- see ordering information for available channels

Outline Drawing



A DIMENSION	
RANGE	inches [mm]
600	1.76 [44,7]
800	1.58 [40,1]
1000	1.98 [50,2]
1200	1.98 [50,2]
1500	1.86 [47,2]
1700	2.11 [53,6]



DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.03 IN. [0.5 MM] unless otherwise noted.

* tolerance = +.005 - .001 [+.13 - .03]
** tolerance = +.005 - .005 [+ .13 - .13]

VLS Option - Free Release Protection

The patented Velocity Limiting System (VLS) is an option for PT9000 Series cable extension transducers that limits cable retraction to a safe 40 to 55 inches per second for the single spring option and 40 to 80 inches per second for the higher tension dual spring option.

The VLS option prevents the measuring cable from ever reaching a damaging velocity during an accidental free release. This option is ideal for mobile applications that require frequent cable disconnection and reconnection. It prevents expensive unscheduled downtime due to accidental cable mishandling or attachment

How To Configure Model Number for VLS Option:

VLS 9150 - - - - - - -

creating VLS model number (example)...

1. select PT9150 model
2. remove "PT" from the model number
3. add "VLS"
4. completed model number !

PT9150-1200-111-1110
~~PT~~9150-1200-111-1110
 VLS + 9150-1200-111-1110
 VLS9150-1200-111-1110

Ordering Information

Model Number:

PT9 150- _____ **0**
order code: **R** **A** **B** **C** **D** **E** **F** **G**

Sample Model Number:

PT9150 - 0800 - 111 - 1110

- R** range: 500 inches
- A** enclosure: aluminum
- B** measuring cable: nylon-coated stainless front
- C** cable exit: front
- D** output signal: TTL/CMOS driver
- E** resolution: 100 ±2 pulses per inch

Full Stroke Range:

english ranges	R order code:	0600	0800	1000	1200	1500	1700
	full stroke range, min:	600 in.	800 in.	1000 in.	1200 in.	1500 in.	1700 in.
	cable tension (± 35%):	27 oz.	24 oz.	20 oz.	19 oz.	18 oz.	17 oz.

metric ranges	R order code:	15000	20000	25000	30000	35000	40000
	full stroke range, min:	15.000 mm	20.000	25.000	30.000	35.000	40.000
	cable tension (± 35%):	7,5 N	mm 6,7 N	mm 5,6 N	mm 5,3 N	mm 5,0 N	mm 4,7 N

Enclosure Material:

A order code:	1	3
enclosure material:	powder-painted aluminum 1g	303 stainless steel
max. acceleration:	60 inches/sec.	1g
max. velocity:		60 inches/sec.

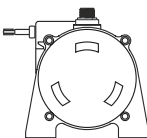
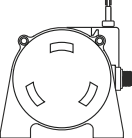
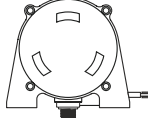
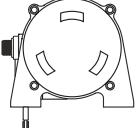
Measuring Cable:

B order code:	1	2
cable construction:	nylon-coated stainless steel rope*	bare stainless steel rope*
general use:	indoor	outdoor, debris, high temperature

*cable diameter:

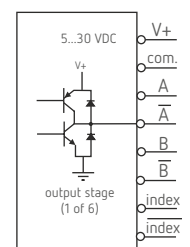
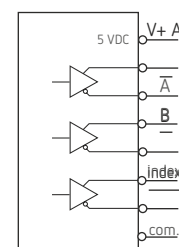
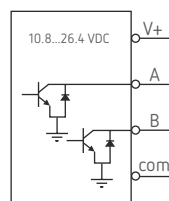
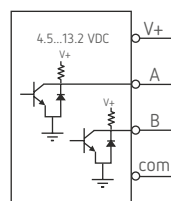
stroke range:	0600	0800	1000	1200	1500	1700
nylon-coated stainless:	.034 in.	.019 in.	.019 in.	.019 in.	.014 in.	.014 in.
bare stainless:	.031 in.	.018 in.	.018 in.	.018 in.	.015 in.	.015 in.

Cable Exit:

C order code:	1	2	3	4
	front	top	back	down
				

Output Signals:

D order code:	1	2	3	4
output driver:	TTL - CMOS	Open Collector	5 V - Line Driver	Universal Line Driver
Input voltage (V+):	4.5...13.2 Vdc	10.8...26.4 Vdc	5 Vdc	5...28 VDC
Sink current:	20 mA max.	20 mA max.	20 mA max.	20 mA max.
Input current:	80 mA max.	80 mA max.	150 mA max.	100 mA max, no load

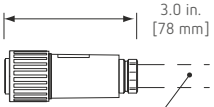

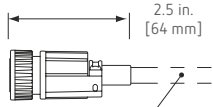
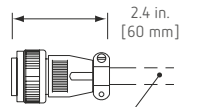


Ordering Information (cont.)

Resolution:

E order code:	1	2	3	4
english ranges:	100 ±2 pulses per in.	200 ±4 pulses per in.	250 ±5 pulses per in.	10 ±0.2 pulses per in.
metric ranges:	5 ±0,1 pulses per mm	10 ±0,2 pulses per mm	12,5 ±0,25 pulses per mm	0,5 ±0,01 pulses per mm

Electrical Connection:

F order code:	1	2	3	4
	6-pin plastic connector with mating plug IP 67, NEMA 4X*,6	25-ft. instrumentation cable 24 AWG, shielded IP 67, NEMA 6	18-pin plastic connector with mating plug IP 65, NEMA 4	6-pin metal connector with mating plug IP 67, NEMA 6
				
	.30 – .39 in. [8 – 10 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded	.26 – .30 in. [6,6 – 7,6 mm] cable dia. 20 – 24 AWG conductor size connector: Conxall 14282-18PG-300-K mating plug: Conxall 13282-18SG-326-K	3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S

6-pin mating plug:

	TTL/CMOS Open Collector	5 V Line Driver pin Universal Line Driver
A	input voltage	input voltage
B	common	common
C	channel A	channel A
D	channel B	channel B
E	-	channel A'
F	-	channel B'

contact view



18-pin mating plug:

	TTL/CMOS Open Collector	5 V Line Driver pin Universal Line Driver
1	input voltage	input voltage
2	common	common
3	channel B	channel B
6	channel A	channel A
7	-	index
11	-	channel B'
12	-	channel A'
15	-	index'

contact view



25-ft. instrumentation cable:

	TTL/CMOS Open Collector	5 V Line Driver color Universal Line Driver
red	input voltage	input voltage
black	common	common
green	channel A	channel A
white	channel B	channel B
Blue	-	channel A'
brown	-	channel B'
yellow	-	index
Orange	-	index'

* – applies to stainless steel enclosure only.